Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) An apparatus for measuring a parameter of a process flow flowing within a pipe, the apparatus comprising:

a first meter ~~portion~~ including a sensor that ~~for providing~~ provides a measurement signal indicative of a parameter of the flow propagating through the pipe;

a second meter ~~portion~~ including a sensor ~~for providing~~ that provides a sound measurement signal indicative of the speed of sound propagating through the process flow; ~~within the pipe;~~ and

a processor that determines ~~for providing~~ a compensated measurement signal indicative of the measurement signal compensated for entrained gas in the process flow, in response to the measurement signal and the sound measurement signal.

2. (Currently Amended) The apparatus of claim 1, wherein the second meter ~~portion~~ includes at least two strain sensors disposed at different axial locations along the pipe, each of the strain sensors providing a respective strain signal indicative of acoustic pressure disturbances within the pipe at a corresponding axial position, wherein the second meter, ~~processor,~~ responsive to said pressure signals, provides the sound measurement signal.

2. (Canceled)

3. (Currently Amended) The apparatus of claim 1, wherein the first meter ~~portion~~ includes at least two strain sensors at different axial locations along the pipe, each of the strain sensors providing a respective strain signal indicative of ~~vortical~~ unsteady pressure disturbances within the pipe at a corresponding axial position, wherein the first meter, ~~processor,~~ responsive to said strain signals, provides a signal indicative of a parameter of the process flow flowing within the pipe.

4. (Currently Amended) The apparatus of claim 1, wherein the first meter ~~portion~~ is a volumetric flow meter and the measurement signal is indicative of the volumetric flow rate of the process flow.

5. (Original) The apparatus of claim 4, wherein the volumetric flow meter is an electromagnetic flow meter.

6. (Currently Amended) The apparatus of claim 1, wherein the first meter ~~portion~~ is a consistency flow meter and the measurement signal is indicative of the consistency of the process flow.

7. (Original) The apparatus of claim 6, wherein the consistency meter is a microwave consistency meter.

8. (Currently Amended) The apparatus of claim 2, wherein the ~~processor~~ second meter determines the slope of an acoustic ridge in the k -ω plane to determine the sound measurement signal.

9. (Canceled)

10. (Currently Amended) The apparatus of claim 3, wherein the parameter of the process flow ~~fluid~~ is one of velocity of the process flow and/or the volumetric flow of the process flow. ~~fluid.~~

11. (Currently Amended) The apparatus of claim 3, wherein the first meter ~~processor~~ determines the slope of a convective ridge in the k-ω plane to determine the velocity of the ~~fluid~~ process flow flowing in the pipe.

12. (Canceled)

13. (Currently Amended) The apparatus of claim 1, wherein the ~~processor~~ second meter provides a signal indicative of the gas volume fraction of the process flow in response to the sound signal measurement.

14. (Currently Amended) The apparatus of claim 1, wherein the compensated measurement signal is indicative of the volumetric flow rate of the non-aerated portion of the process flow.

15. (Previously Presented) The apparatus of claim 14, wherein the compensated measurement signal is determine by $Q_{comp}=Q_{meas}(1-\phi)$, where Q_{comp} is the compensated measurement signal, Q_{meas} is the measurement signal, and ϕ is the gas volume fraction of the process flow.

16. (Previously Presented) The apparatus of claim 1, wherein the measurement signal is indicative of the consistency of the process flow flowing in the pipe.

17. (Currently Amended) The apparatus of claim 1, wherein the compensated measurement signal is indicative of the consistency of the non-aerated portion of the process flow.

18. (Previously Presented) The apparatus of claim 17, wherein the compensated measurement signal is determine by $Q_{comp}=Q_{meas}(1-R\phi)$, where Q_{comp} is the compensated measurement signal, Q_{meas} is the measurement signal, R is a compensation factor, and ϕ is the gas volume fraction of the process flow.

19. (Currently Amended) The apparatus of claim 18, ~~17,~~ wherein the compensation factor is approximately 1.4.

20. (Previously Presented) The apparatus of claim 1, wherein the process flow is one of a liquid having entrained gas, a mixture having entrained gas, a liquid-liquid mixture having entrained gas, a liquid-solid mixture having entrained gas, and a slurry having entrained gas.

21. (Currently Amended) The apparatus of claim 1, wherein the first meter and second meter have at least one common sensor. ~~processor may be included with at least one of the first meter portion, the second meter portion and separate from the first and second meter portion.~~

22. (Currently Amended) A method for measuring a parameter of a process flow flowing within a pipe, the method comprising:

receiving a measurement signal indicative of a parameter of the process flow propagating through the pipe;

receiving a sound measurement signal indicative of the speed of sound propagating the process flow; ~~within the pipe;~~ and

determining a compensated measurement signal indicative of the measurement signal compensated for entrained gas in the process flow, in response to the measurement signal and the sound measurement signal.

23. (Currently Amended) The method of claim 22, further including;

measuring ~~the measurement signal indicative of a~~ the parameter of the process flow propagating through the pipe, and providing the measurement signal; and

measuring ~~a sound measurement signal indicative of~~ the speed of sound propagating the process flow, and providing the sound measurement signal. ~~within the pipe.~~

24. (Previously Presented) The method of claim 22, further includes determining a signal indicative of the gas volume fraction of the process flow in response to the sound signal measurement.

25. (Previously Presented) The method of claim 22, wherein the measurement signal is indicative of the volumetric flow rate of the process flow flowing in the pipe.

26. (Previously Presented) The method of claim 25, wherein the compensated measurement signal is indicative of the volumetric flow rate of the non-aerated portion of the process flow.

27. (Previously Presented) The method of claim 26, wherein the compensated measurement signal is determined by $Q_{comp}=Q_{meas}(1-\phi)$, where Q_{comp} is the compensated measurement signal, Q_{meas} is the measurement signal, and ϕ is the gas volume fraction of the process flow.

28. (Previously Presented) The method of claim 22, wherein the measurement signal is indicative of the consistency of the process flow flowing in the pipe.

29. (Previously Presented) The method of claim 28, wherein the compensated measurement is indicative of the consistency of the non-aerated portion of the process flow.

30. (Previously Presented) The method of claim 29, wherein the compensated measurement signal is determined by $Q_{comp}=Q_{meas}(1-R\phi)$, where Q_{comp} is the compensated measurement signal, Q_{meas} is the measurement signal, R is a compensation factor and ϕ is the gas volume fraction of the process flow.

31. (Currently Amended) The apparatus of claim 30, wherein the compensation factor is <u>approximately</u> 1.4.

32. (Previously Presented) The method of claim 22, wherein the process flow is one of a liquid having entrained gas, a mixture having entrained gas, a liquid-liquid mixture having entrained gas, a liquid-solid mixture having entrained gas, and a slurry having entrained gas.

33. (Currently Amended) The method of claim 22, wherein the measurement signal is indicative of the volumetric flow <u>rate</u> of the process flow which is provided by a volumetric flow meter.

34. (Previously Presented) The method of claim 33, wherein the volumetric flow meter is an electromagnetic flow meter.

35. (Previously Presented) The method of claim 22, wherein the measurement signal is indicative of the consistency of the process flow which is provided by a consistency meter.

36. (Previously Presented) The method of claim 35, wherein the consistency meter is a microwave consistency meter.

37. (Currently Amended) The method of claim 22, wherein the sound measurement signal is provided by a ~~second~~ meter ~~portion~~ that includes at least two strain sensors disposed at different axial locations along the pipe, each of the strain sensors providing a respective strain signal indicative of an acoustic pressure disturbance within the pipe at a corresponding axial position.

38. (Currently Amended) The method of claim 37, further includes determining a signal indicative of the gas volume fraction of the process flow in response to the sound measurement signal. ~~strain signals.~~

39. (Previously Presented) The method of claim 37, further includes determining the slope of an acoustic ridge in the k-ω plane to determine the sound measurement signal.

40. (Currently Amended) The method of claim 22, wherein the measurement signal is provided by a ~~first~~ meter ~~portion~~ that includes at least two strain sensors at different axial locations along the pipe, each of the strain sensors providing a respective strain signal indicative of ~~a vortical~~ unsteady pressure disturbances within the process flow flowing in the pipe at a corresponding axial position, wherein the ~~processor~~ meter, responsive to said strain signals, provides a signal indicative of a parameter of the process flow flowing within the pipe.

41. (Currently Amended) The method of claim 40, wherein the parameter of the process flow ~~fluid~~ is one of velocity of the process flow and/or the volumetric flow of the process flow. ~~fluid.~~

42. (Currently Amended) The method of claim 40, further includes determining the slope of a convective ridge in the k-ω plane to determine the velocity of the process flow ~~fluid~~ flowing in the pipe.

43. (New) The method of claim 22, wherein the measurement signal and the sound measurement signal are determined from a sensed signal from at least one common sensor disposed at a location of the pipe.

44. (New) The apparatus of claim 1, wherein the second meter measures the speed of an one dimensional acoustic wave propagating through the process flow.

45. (New) The apparatus of claim 1, wherein the second meter measures the speed of an acoustic wave propagating axially through the process flow in the pipe.

46. (New) The apparatus of claim 1, wherein the second meter includes 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, or 16 sensors disposed at different axial locations along the pipe, each of the strain sensors providing a respective strain signal indicative of acoustic pressure disturbances within the pipe at a corresponding axial position, wherein the second meter, responsive to said pressure signals, provides the sound measurement signal.

47. (New) The apparatus of claim 1, wherein the processor determines the gas volume fraction of the process flow in response to the sound measurement signal and at least one of the pressure and temperature of the process flow.

48. (New) The apparatus of claim 46, wherein the apparatus further includes at least one of a pressure sensor and temperature sensor to respective determine the pressure and temperature of the process flow.

49. (New) The apparatus of claim 13, wherein the gas volume fraction is determined using the following formula:

Gas Voulume Fraction = -B+sqrt(B^2-4*A*C))/(2*A)

wherein A=1+rg/rl*(K_{eff}/P-1)-K_{eff}/P, B=K_{eff}/P-2+rg/rl; C=1-K_{eff}/rl*a_{meas}^2; Rg = gas density, rl = liquid density, K_{eff} = effective K (modulus of the liquid and pipewall), P= pressure, and a_{meas} = measured speed of sound.

50. (New) The apparatus of claim 3, wherein the unsteady pressure disturbances are vortical pressure disturbances.

51. (New) The apparatus of claim 3, wherein the strain signals indicative are indicative of the velocity of the process flow through the pipe.

52. (New) The method of claim 22, wherein the sound measurement signal is indicative of the speed of a one dimensional acoustic wave propagating through the process flow.

53. (New) The method of claim 22, wherein the sound measurement signal is provided by a meter includes 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, or 16 sensors disposed at different axial locations along the pipe, each of the strain sensors providing a respective strain signal indicative of acoustic pressure disturbances within the pipe at a corresponding axial position, wherein the meter, responsive to said pressure signals, provides the sound measurement signal.

54. (New) The method of claim 22, further includes determining the gas volume fraction in response to the sound measurement signal and at least one of a pressure signal and temperature signal of the process flow indicative of the pressure and temperature, respectively, of the process flow.

55. (New) The method of claim 54, wherein the pressure signal and/or temperature signal is provided by a respective pressure sensor and temperature sensor.

56. (New) The method of claim 24, wherein the gas volume fraction is determined using the following formula:

Gas Voulume Fraction = -B+sqrt(B^2-4*A*C))/(2*A)

wherein A=1+rg/rl*(K_{eff}/P-1)-K_{eff}/P, B=K_{eff}/P-2+rg/rl; C=1-K_{eff}/rl*a_{meas}^2; Rg = gas density, rl = liquid density, K_{eff} = effective K (modulus of the liquid and pipewall), P= pressure, and a_{meas} = measured speed of sound.

57. (New) The method of claim 40, wherein the unsteady pressure disturbances are vortical pressure disturbances.

58. (New) The apparatus of claim 40, wherein the strain signals indicative are indicative of the velocity of the process flow through the pipe.

59. (New) An apparatus for measuring a parameter of a process flow flowing within a pipe, the apparatus comprising:

a first means for providing a measurement signal indicative of a parameter of the flow propagating through the pipe;

a second means for providing a sound measurement signal indicative of the speed of sound propagating through the process flow; and

a third means for determining a compensated measurement signal indicative of the measurement signal compensated for entrained gas in the process flow, in response to the measurement signal and the sound measurement signal.